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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,756

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Kenji Yasuda

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EXAMINER

HENKEL, DANIELLE B

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

03/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,756	Applicant(s) YASUDA ET AL.	
	Examiner DANIELLE HENKEL	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Summary

1. This is the initial Office action on the 10/525756 application filed on August 2, 2005.
2. Claims 1-20 are pending and have been fully considered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, and 7-20 are rejected under 35 U.S.C. 102(b) as being anticipated by MORIGUCHI (May 2002).

a. With respect to claim 1, MORIGUCHI teaches a micro-chamber for cell culture, which comprises a substrate which does not absorb light of a specific wavelength (glass slide), and an absorption layer which absorbs light of the specific wavelength (chromium layer) and a region made of a solid substance which does not absorb light of the specific wavelength and has a melting point lower than the boiling point of water (agar), both being laid over the substrate (Agar microchambers and Photo-thermal etching sections).

b. With respect to claim 2, MORIGUCHI teaches the absorption layer is a thin film laid over the surface of the substrate and the region made of a

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substance having a melting point lower than the boiling point of water is formed over the absorption layer (Agar microchambers section and Figure 1).

c. With respect to claim 3, MORIGUCHI teaches the thin film as the absorption layer has a thickness (5nm) permitting a transmittance of 50% or greater (>60%) to visible light (Photo-thermal etching section).

d. With respect to claims 4, and 12-13, MORIGUCHI teaches the absorption layer is a thin film pattern laid over the surface of the substrate and the line width of the pattern is narrower than the specific wavelength (Conclusion section).

e. With respect to claim 7, MORIGUCHI teaches the solid substance having a melting point lower than the boiling point of water is agarose (Agar microchambers section).

f. With respect to claim 9, MORIGUCHI teaches light of the specific wavelength is light from a 1064 nm Nd:YAG laser which is known in the art to have a wavelength not absorbed by water as evidenced in the Specification on page 10.

g. With respect to claims 10 and 14-20, MORIGUCHI teaches a micro chamber for cell culture, which comprises a unit of irradiating light of the specific wavelength capable of forming a space by heating and melting a region made of a solid substance which does not absorb light of the specific wavelength and has a melting point lower than the boiling point of water (Photo-thermal etching section).

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- h. With respect to claim 11, MORIGUCHI teaches the unit of irradiating light irradiates a focused beam (Figure 3, Photo-thermal etching section).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over MORIGUCHI (May 2002).

a. With respect to claim 5, MORIGUCHI teaches the absorption absorbs light of the specific wavelength as mentioned in the above rejections, but not particles in the low melting point substance. It would have been obvious to one having ordinary skill in the art at the time of the invention to use particles with the specified light absorption properties, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. In addition, it would have been obvious to one having ordinary skill in the art at the time of the invention to place the absorption layer in the substance, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

b. With respect to claim 6, MORIGUCHI teaches the solid substance having a melting point lower than the boiling point of water is specifically low-melting-point agar and that agar gel with a low melting point is important for non-destructive photo-thermal etching as it avoids damaging neighboring cells by the heat from the microchambers (Agar microchambers section). MORIGUCHI teaches the claimed invention except for a solid substance having a melting point not greater than 45 degrees Celsius. It would have been obvious to one having ordinary skill in the art at the time of the invention to choose a solid substance with a melting point not greater than 45 degrees C, since it has been held to be

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within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

In re Leshin, 125 USPQ 416.

c. With respect to claim 8, MORIGUCHI teaches the solid substance has a melting point lower than the boiling point of water as mentioned in the above rejections, but does not explicitly disclose two different substances in combination. It would have been obvious to one having ordinary skill in the art at the time of the invention to use multiple substances combined to achieve the low boiling point, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Priority

9. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE HENKEL whose telephone number is (571)270-5505. The examiner can normally be reached on Mon-Thur: 7:30am-5pm, Alternate Fridays: 7:30am-4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Beisner/
Primary Examiner, Art Unit 1797

/DANIELLE HENKEL/
Examiner, Art Unit 1797